

Remedial Planning Activities at Selected Uncontrolled Hazardous Substance Disposal Sites in Region I



**Environmental Protection Agency** Region I

ARCS Work Assignment No. 09-1JZZ

Ucinite Corp. /DOT Corp. Newton, MA MAD985300805 TDD# 9202-20-ATP

Preliminary Assessment Final Report

March 1993

TRC Companies, Inc.

TAMS Consultants, Inc.
PEI Associates, Inc.
Jordan Communications, Inc.



## PRELIMINARY ASSESSMENT UCINITE CORPORATION/DOT CORPORATION NEWTON, MASSACHUSETTS

#### MAD985300805

#### FINAL REPORT

#### Prepared for

# U.S. ENVIRONMENTAL PROTECTION AGENCY Region I 90 Canal Street Boston, Massachusetts 02203-2211

Work Assignment: 09-1JZZ

EPA Region:

Contract No.: 68-W9-0033 (ARCS)

TRCC Document No.: A92-1745

TRCC Project No.: 1-636-010-0-1J18

TDD No.: 9202-20-ATP

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Date Prepared: March 8, 1993

Revision: 0

TRC COMPANIES, INC.

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#### INTRODUCTION

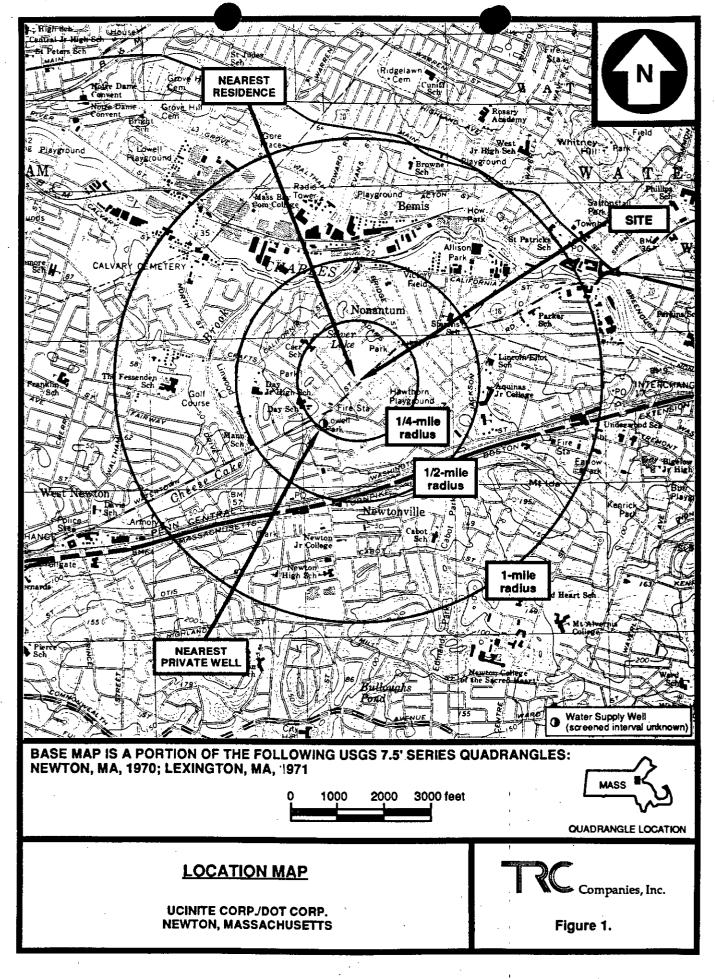
The TRC Companies, Inc. (TRCC), contracted by the Region I U.S. Environmental Protection Agency (EPA) Waste Management Division under the Alternative Remedial Contract Strategy (ARCS/Region I) program, was requested to perform a Preliminary Assessment (PA) of the Ucinite Corporation/DOT Corporation property located in Newton, Massachusetts. This PA was completed under Work Assignment No. 09-1JZZ and Technical Directive Document (TDD) No. 9202-20-ATP issued to TRCC on February 28, 1992.

Background information used to generate this report was obtained through file reviews at the Massachusetts Department of Environmental Protection (MADEP) and at U.S. EPA Region I in Boston, MA, telephone interviews with local officials and individuals knowledgeable of the property history and characteristics, and contacts with other Federal, State, and local agencies. At the direction of the EPA, TRCC did not conduct a site reconnaissance of the property. All descriptive information in this report is based on details obtained from existing reports regarding the site.

This Preliminary Assessment report follows guidelines developed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, commonly referred to as Superfund. However, they do not necessarily fulfill the requirements of other EPA regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other Federal, State, or local regulations. Preliminary Assessments are intended to provide an initial screening of sites to facilitate EPA's assignment of site priorities. They are limited efforts and are not intended to supersede more detailed investigations.

#### SITE DESCRIPTION/SITE HISTORY

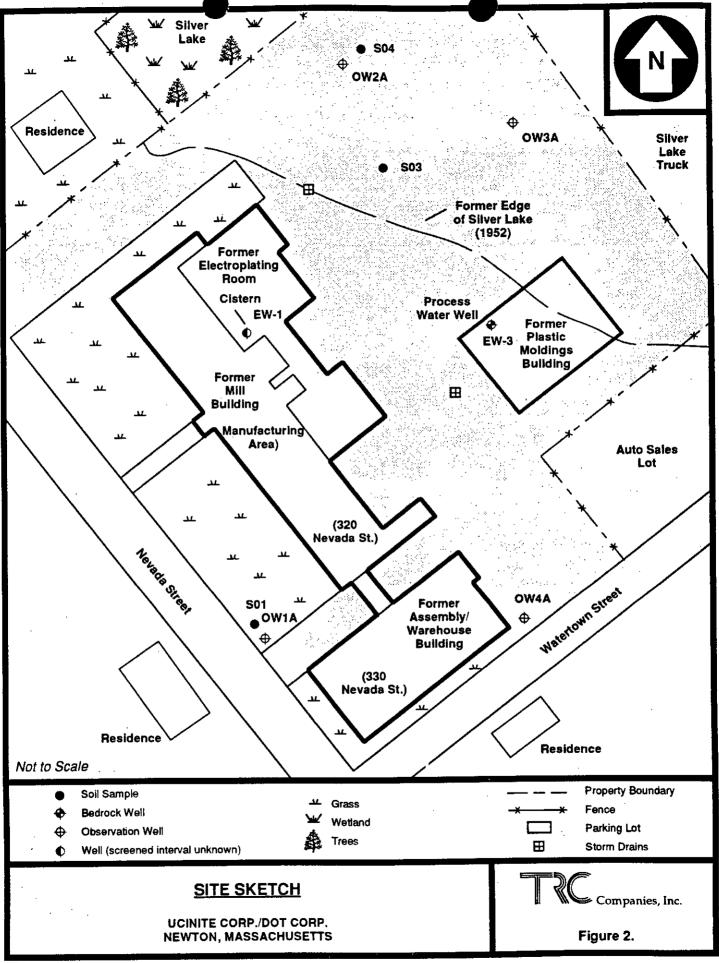
The Ucinite Corporation/DOT Corporation is located at 320 Nevada Street, Newton, Massachusetts, Middlesex County, at 42° 21′ 15″ north latitude and 71° 12′ 30″ west longitude (Fitzgerald, 1984) (Figure 1). It is part of a larger property designated as 459 Watertown Street which currently consists of a four-story brick mill building, a one-story



building, and a two-story office building surrounded by a paved, landscaped parking lot (Fitzgerald, 1984). The 459 Watertown Street property is listed on the CERCLIS as the TRW-DOT Division Site, (CERCLIS Number: MAD001032671) (EPA, 1993). Representatives of the Massachusetts Department of Environmental Quality Engineering (DEQE) performed a Preliminary Assessment and Site Inspection of the property in 1984 (Fitzgerald, 1984; Johnson, 1984a). The mill building is designated 320 Nevada Street and entirely overlaps the 459 Watertown Street property (City of Newton, 1992).

The Ucinite Corporation/DOT Corporation property is in a mixed residential/industrial neighborhood in the Nonantum section of Newton (City of Newton, 1992). The nearest residence is 50 feet west of the mill building, across a driveway (Figure 2). Residences are also located across Watertown Street (Jung/Brannen, 1983). The property is 5.1 acres which slope gradually to the north-northeast (Jung/Brannen, 1983). At an average elevation of 47.6 feet above mean sea level, the property is located in Zone C (not prone to flooding) as defined on the Federal Emergency Management Agency's Flood Insurance Rate Map (FEMA, 1986). Immediately adjacent to the mill building to the northwest is a small wetland. The wetland is what remains of Silver Lake, a small pond that has been mostly filled (Johnson, 1984b). The Charles River flows east-northeast 2000 feet northwest of the property (USGS, 1987). There are two drains in the parking lot northeast behind the mill building which ultimately empty into the Charles River (Jung/Brannen, 1983).

The mill building, 320 Nevada Street, was built in 1860 as the Silver Lake Cordage Company, a rope manufacturer (Jung/Brannen, 1983). Silver Lake Cordage Company left the building in 1928 and leased it to United-Carr, Inc. in 1938 (CDM, 1984a). No information was located on what materials were used on site or disposed of by the Silver Lake Cordage Company. United-Carr, Inc. ("Ucinite") manufactured and electroplated metal fasteners, and generated the following wastes: metal plating sludge, chlorinated solvents, and molding plastics containing phenols (CDM, 1984a). TRW Incorporated bought United-Carr, Inc. in 1968 and it became the DOT/Fasteners Division of TRW (CDM, 1984a). TRW continued to produce metal fasteners at the site until 1983, when TRW moved the former United-Carr operations and sold the land to Mr. Joseph Biotti of the One Nevada Realty Trust on



September 18, 1984 (Burt, 1984). The mill building is currently leased to Dragon Systems, Inc., a computer consulting company (Gabis, 1992f).

In August, 1982 TRW hired EG&G Consultants of Waltham, MA to perform an environmental site assessment of the facility. EG&G installed three monitoring wells as part of the assessment. A 150-foot deep process water bedrock well to supply water to cool machinery in their plastics molding building (CDM, 1984a). The plastics molding building is now the warehouse. EG&G collected soil boring and ground water samples from the monitoring wells and from the process water well (Fitzgerald, 1984; Johnson, 1984b). The contaminants detected in ground water and soil samples included cadmium, nickel, chromium, zinc, silver, lead, beryllium, copper, cyanide, mercury, and phenolics (Fitzgerald, 1984). The results of the investigation are summarized in the TRW/DOT Preliminary Assessment dated July 10, 1984 (Fitzgerald, 1984). During the EG&G assessment, a cistern 15 feet deep (2.5 ft. × 2.5 ft.) was discovered in the electroplating room of the mill building.

In November 1982, under the supervision of EG&G Consultants, Pollution Control Unlimited, Inc. of New York pumped 700 gallons of water and an unknown quantity of sludge from the cistern and removed it from the site. Analysis of water samples from the cistern detected t-12-dichloroethene (DCE) 2,000 parts per billion (ppb) (CDM, 1984a). After EG&G data analyses determined the presence of ground water following this work, the MADEQE was notified, and the entire 459 Watertown Street property was entered on the CERCLIS as TRW-DOT Division on January 1, 1983, (CERCLIS #: MAD010032671) (EPA, 1993).

From March through May 1983, under the supervision of Camp, Dresser and McKee (CDM) of Boston, MA, a waste disposal company, CECOS International of New York, tested the surfaces of the electroplating room and removed asbestos- and cyanide-contaminated concrete from the room. CECOS also cleaned and removed an empty 1500-gallon above ground trichloroethene tank located outside the rear of the mill building (Abramo, 1983). The asbestos and the tank were removed to a CECOS secure storage facility in Niagara Falls, New York in June 1983 (Johnston, 1984b).

In 1984, TRW hired CDM to further investigate the site and to supervise continuing remediation. CDM sampled all the wells and the cistern in June 1984 for volatile organics by EPA method 624 (CDM, 1984a). Compounds detected in the wells and the cistern included vinyl chloride, methylene chloride, trichloroethylene (TCE), and trans-1,2-dichloroethylene (t-1,2 DCE) (Fitzgerald, 1984; CDM, 1984a). The process water bedrock well was found to contain 545 ppb of t-1,2 DCE (CDM, 1984a). Data summary tables are presented in Appendix A.

CDM then hired Weston Geophysical, Inc. to conduct a ground-penetrating radar survey on July 2, 1984 (Weston, 1984). Weston Geophysical's investigation determined the margin of Silver Lake and identified a water table located at a depth of five feet at the northwest end of the property. The investigation also determined the locations of filled areas and of point sources in the northwest corner of the property (Weston, 1984). These point sources were consistent with the disposal of incineration cinders. The point sources were excavated on September 11, 1984 under the supervision of the MADEQE but no evidence of buried waste materials was found (CDM, 1984b).

On October 24, 1984, the cistern was filled with peastone and sealed (CDM, 1984b). On October 22, 1984, Empro Services, Inc. removed sludge from the drains in the electroplating room, filled the drains with peastone and sealed them. The sludge was taken to SCA Services in Braintree, MA (CDM, 1984b). During the week of October 22, 1984, the electroplating room was again cleaned, treated, and tested for cyanide (CDM, 1984b). The surfaces tested negative for cyanide contamination (CDM, 1984b).

After receiving the EG&G Site Assessment, the MADEQE began monitoring site remediation and removal at the former Ucinite property. The MADEQE completed a Preliminary Assessment of the property on July 10, 1984 and a Site Inspection on August 17, 1984 (Fitzgerald, 1984; Johnson, 1984a). The Commonwealth of Massachusetts determined that all its requirements for site remediation and waste removal had been met and on January 14, 1985, "No Further Action" status was granted for the site under Chapter 21E of the Massachusetts General Laws (Chaplin, 1985).

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Information provided by an anonymous informant was forwarded to the Superfund Site Assessment program in a September 4, 1991 memorandum from William Hanscom, EPA Inspector, to Nancy Smith, EPA Site Assessment Manager, (Hanscom, 1991). According to the informant, the building located at 320 Nevada Street was owned and operated by the Ucinite/DOT Corporation during the 1940s-1950s. During this time, the company disposed of drums and liquid hazardous wastes in Silver Lake (Hanscom, 1991). The informant alleged that the Raytheon Corporation and the Hartz and Mason Corporation also used Silver Lake for hazardous waste disposal. The informant claims that he/she used to fill cans with "white, gooey foam" which were ignited and used as "flame throwers." According to this informant, the 320 Nevada Street property (mill building) was later divided into several parcels and sold to Pat Franci, the Belli Brothers, and the Angelo Paolini Corporation. Drums of waste were said to have been buried by these new owners when Silver Lake was filled (Hanscom, 1991).

On the basis of the above information, the 320 Nevada Street property was entered onto CERCLIS on January 8, 1992 as a potential hazardous waste disposal site (EPA, 1993). During file review for this Preliminary Assessment, it was discovered that the 320 Nevada Street property is completely within the 459 Watertown Street property (Fitzgerald, 1984; Johnson, 1984b).

TRCC's file review of the 320 Nevada Street property indicated that the 320 Nevada Street/ 459 Watertown Street property was owned by TRW until 1984 (CDM, 1984a). On September 18, 1984, the entire 459 Watertown Street property (including 320 and 330 Nevada Street and the plastics molding building) was sold to Mr. Joseph A. Biotti (Burt, 1984). None of the individuals mentioned above (Franci, Belli, or Paolini) own or have ever owned any part of this property. In addition, the portion of Silver Lake on which the property fronted was filled in 1952 (CDM, 1984a). It is not known what wastes may have been discharged to Silver Lake before 1952, however, no filling of the lake occurred at 459 Watertown Street after its resale in 1984.

There are five CERCLIS sites and 139 RCRA notifiers in Newton (EPA, 1992; EPA, 1993). Review of the businesses in the vicinity of 459 Watertown Street indicates that one RCRA

notifier, Paolini Corporation (MAD019529759), is located at 103 Rear Adams Street, Newton. The Silver Lake area is a large open lot bordered by Watertown, Nevada, Linwood, and Adams Streets (USGS, 1987). The Paolini Corporation, on Adams Street is on the opposite side of Silver Lake from the Ucinite/DOT Corporation property on Nevada Street (Figure 1). It may be that the informant was referring to the Adams Street area when he/she discussed recent waste disposal. In addition, another company the informant mentioned, Raytheon Corporation, owned property one block northeast of Adams Street, on Bridge Street (City of Newton, 1992). The waste disposal practices identified by the informant may have occurred on that side of Silver Lake, not at the 320 Nevada Street/459 Watertown Street property.

#### **ENVIRONMENTAL SETTING**

Land in the vicinity of 320 Nevada Street is heavily developed (TRCC, 1992). Most of the property is paved, with little natural soil cover (USGS, 1987). Materials beneath the property consist of sand and gravel fill to a depth of 5 feet, underlain by the peat bottom of what was Silver Lake (Weston, 1984). Bedrock beneath the property consists of the Roxbury Conglomerate (Zen, 1983). The entire area is within the Boston Basin, a structural depression bounded to the west and southwest by the Bloody Bluff Fault Zone (Zen, 1983).

Ground water is found at an average depth of 5 feet across the property (Weston, 1984; Jung/Brannen, 1983). Ground water flow direction is difficult to determine, although it is believed to flow north, toward Silver Lake and the Charles River (CDM, 1984a). A perched water table exists at a depth of 5 feet under the parking lot in the area of the former Silver Lake (Weston, 1984).

The following cities and towns are located within four miles of 320 Nevada Street: Arlington (population: 44,630), Belmont (26,500), Brighton (70,284), Brookline (60,470), Cambridge (72,195), Lexington (29,600), Needham (28,214), Newton (83,528), Waltham (57,384), Watertown (33,284), and Wellesley (26,615) and Weston (10,179) (MA Census, 1991).

Nearly all of these towns obtain their drinking water from the Massachusetts Water Resources Authority (MWRA) (Gabis, 1992a). The MWRA reservoir is located in western Massachusetts and is not within four miles or fifteen miles downstream of the property. Wellesley has two ground water wells located 3.75 miles southwest of the site, which serve 40 percent of 25,000 customers (10,000) (Gabis, 1992b). These wells are located in a Wellhead Protection Area (Gabis, 1992b). An unknown number of residents of Newton, Waltham, and Belmont are served by private wells (Gabis 1992a; DOH: Newton, 1992; Sosnicki, 1992; Brouillet, 1992). The nearest private well is located 0.24 miles southwest of the property on Prescott Street in Newton (DOH: Newton, 1992). A total of 112 people are estimated to use private well water within four miles of the property (Gabis, 1992a). Private drinking water well data was collected directly from lists provided by towns with private wells.

Surface water runoff at the property apparently runs behind the mill building (north) and into the remnant wetland of Silver Lake. This wetland is approximately 100 feet north of the mill building and is 5 acres in size (Jung/Brannen, 1983). It appears to be internally drained (USGS, 1987). Surface water runoff from the property is also channelled into two storm drains immediately to the northeast of the mill building, which ultimately empty into the Charles River 2,000 feet northwest of the property site. These are on public water supply intakes or reservoirs downstream of the property along the Charles River (USGS, 1987). The Charles River flows 14 miles downstream from the property and forms an estuary in Boston Inner Harbor before dispersing into the Outer Harbor at Castle Island (USGS, 1987; NWI, 1977a,b) (Figure 3).

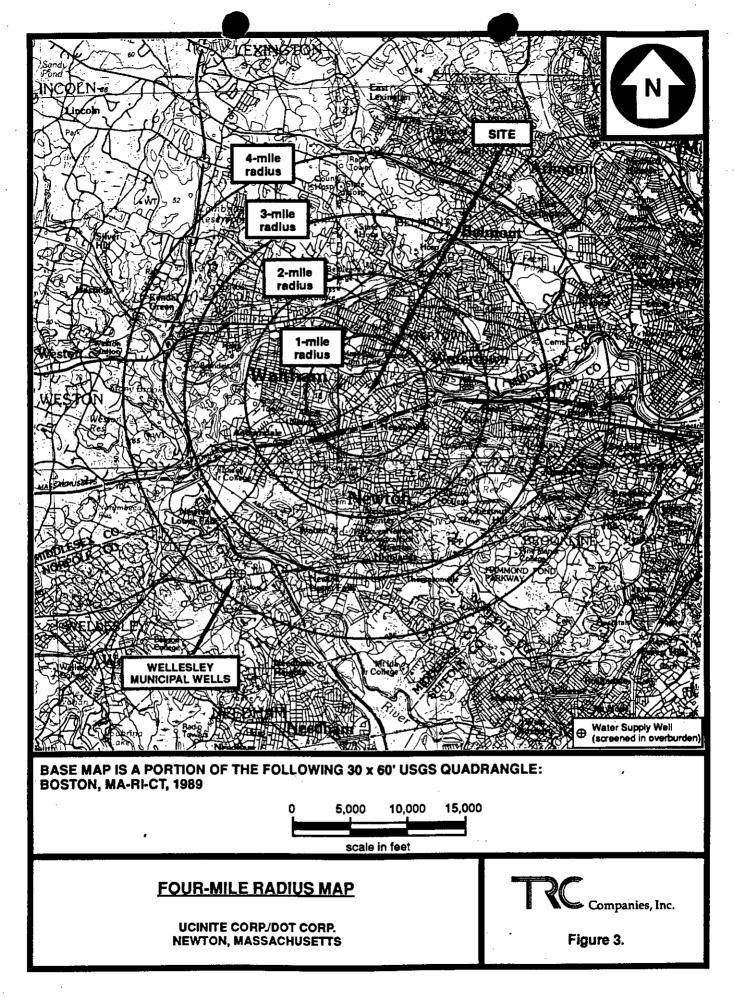
The Charles River flows at an average rate of 304 cubic feet per second and is tidal beyond the locks of the Charles River Dam (NWI, 1977b; USGS, 1987; USGS, 1990). It is a Class B waterway and, although this section of the Charles River is not stocked with fish, fishing is permitted along these sections (Gabis, 1992c,d). There is one wetland located 2.3 miles downstream of the site. It is a 12.8-acre, palustrine, forested island with approximately 500 feet of frontage (NWI, 1977a,b). There are no threatened or endangered species living within a 4-mile radius of the site or along the Charles River downstream of the property (Lauber,

1992). Silver Lake is the only wetland within 0.5 miles of the site (NWI, 1977a,b). It covers approximately five acres (Jung/Barren, 1983).

The nearest residence is 50 feet west of the mill building (Jung/Brannen, 1983).

Approximately 12 people live in residences within 200 feet of the mill building (Jung/Brannen, 1983). There are no schools or day care centers within 200 feet of the mill building (USGS, 1987). Approximately 946 people live within 0.25 miles, 17,871 people within one mile, and 266,640 people within four miles of the property (Gabis, 1992a).

Approximately 320 people currently work at 459 Watertown Street. Two hundred work at Dragon Systems, Inc., in the mill building (320 Nevada Street), 70 people work for Hygeia, Inc., an environmental consulting company at 330 Nevada Street, and 50 people work in the former plastics molding building at Am-Care Medical Services, Inc. (Gabis, 1992e,f).



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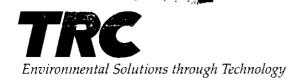
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#### APPENDIX A

### DATA SUMMARY TABLES Prepared by Camp, Dresser, & McKee

July, 1984



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March 29, 1993

Mr. Joseph A. Biotti P.O. Box 83 Newton, MA 02195

Subject:

Final PA Report

Ucinite Corp./DOT Corp. Newton, Massachusetts

Work Assignment No. 09-1JZZ

Reference No. 1-636-010-0-1J18, TDD No. 9202-20-ATP

CERCLIS No. MAD985300805

Dear Mr. Biotti:

Enclosed is a copy of the Final PA Report for Ucinite Corp./DOT Corp. located in Newton, Massachusetts.

If you have any questions, please contact the U.S. Environmental Protection Agency (U.S. EPA) State Coordinator, Nancy Smith, at (617) 573-9697.

Sincerely,

Paul A. Hughes

ARCS Program Manager

PAH:ko/ARCS1376

Enclosure

cc:

S. Hayes, U.S. EPA (w/o enclosure)

N. Smith, U.S. EPA (w/o enclosure)

H. Panchal, MADEP (w/o enclosure)

I. Babroudi, MADEP (w/o enclosure)



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March 10, 1993

Ms. Sharon Hayes Superfund Support Section (HSS-CAN7) U.S. EPA Waste Management Division JFK Federal Building Boston, MA 02203-2211

Subject:

Final Preliminary Assessment Package

Ucinite Corporation/DOT Corporation

Newton, Massachusetts W.A. No. 09-1JZZ

Reference No. 1-636-010-0-1J18, TDD No. 9202-20-ATP

CERCLIS No. MAD985300805

Dear Ms. Hayes:

Enclosed are two copies of the Final Preliminary Assessment Package for the Ucinite Corporation/DOT Corporation property in Newton, MA. Draft Report comments submitted by the EPA and the State have been incorporated.

This package was prepared under Contract No. 68-W9-0033, W.A. No. 09-1JZZ. Site closeout documentation will follow shortly.

If you have any questions, please do not hesitate to call.

Sincerely,

Paul A. Hughes

ARCS Program Manager

Enclosure

cc: N. Smith, EPA SAM